REGULATION 6.15 Standardsof Performance for Gasoline Transfer to Existing Service Station Storage Tanks (Stage I Vapor Recovery)

Air Pollution Control District of Jefferson County
Jefferson County, Kentucky

Relates To: KRS Chapter 77 Air Pollution Control
Pursuant To: KRS Chapter 77 Air Pollution Control
Necessity And Function: KRS 77.180 provides that the Air Pollution Control Board may make and enforce all needful orders, rules, and regulations necessary or proper to accomplish the purposes of KRS Chapter 77. This regulation provides for the control of emissions from gasoline delivery and storage tanks at existing service stations.

SECTION 1 Applicability

This section applies to the transfer of volatile organic compounds from transport vehicle tanks into storage tanks at service stations and the equipment involved therein. Owner/Operators of service stations and transporters of fuels must comply this regulation.

SECTION 2 Definitions

Terms used in this regulation not defined herein shall have the meaning given them in Regulation 1.02.

2.1 "Affected facility" means the gasoline storage tanks at a service station with a capacity greater than 250 gallons each.

2.2 "Service station" means any public or private establishment which dispenses gasoline into vehicle fuel tanks.

2.3 "Submerged fill pipe" means any fill pipe the discharge of which is entirely submerged when the liquid level is six inches above the bottom of the tank; or when applied to a tank which is loaded from the side, shall mean any fill pipe the discharge opening of which is entirely submerged when the liquid level is two times the fill pipe diameter above the bottom of the tank.

2.4 "Vapor balance system" means a system which transfers vapors from storage tanks during filling operations to the storage compartment of the transport vehicle delivering fuel.

2.5 "Vent line restriction" means:

2.5.1 An orifice of one-half to three-quarter inch inside diameter in the vent line,

2.5.2 A pressure-vacuum relief valve which opens at not less than eight ounces per square inch pressure and not less than 0.5 ounces per square inch vacuum unless a different vacuum relief setting is required by safety or fire authorities, or

2.5.3 A vent shut-off valve which is activated by connection of the vapor return hose.

SECTION 3 Standard for Gasoline Transfer

3.1 The owner or operator of an affected facility shall install, maintain and operate the following devices on the storage tanks:

3.1.1 Submerged fill pipe

3.1.2 If the gasoline storage tank is equipped with a separate gauge well, a gauge well drop tube shall be installed which extends to within six inches of the bottom of the tank;

3.1.3 Vent line restrictions on the affected facility; and

3.1.4 Vapor balance system and vapor tight connections on the liquid fill and vapor return hoses. The cross-sectional area of the vapor return hose and any other vapor return passages in the circuit connecting the vapor space in the service station tank to that of the truck tank must be at least 50 percent of the liquid fill hose, cross-sectional area for each tank and free of flow restrictions to achieve acceptable recovery. The vapor balance equipment must be maintained according to the manufacturer's specifications. The type, size and design of the vapor balance system are subject to the approval of the District.

3.2 The owner or operator may elect to use an alternate control system, provided it can be demonstrated to the District's satisfaction to achieve an equivalent control efficiency.

3.3 The owner or operator shall not allow delivery of fuel to the storage tanks until the vapor balance system is properly connected to the transport vehicle and the affected facility.

3.4 No person shall deliver gasoline to a service station without connecting the vapor return hose between the tank of the delivery truck and the storage tank receiving the product. Also the vapor balance system must be operating in accordance with the manufacturer's specifications.

3.5 Truck tank hatch openings for the purpose of visual inspection are permitted for a period not to exceed one minute and only after pumping from that compartment has stopped for at least three minutes prior to the opening. All truck tank hatches must be closed during pumping.

3.6 Except for above ground tank filling, all lines must be gravity drained in such a manner that upon disconnect no liquid spillage would be expected.

3.7 Above ground tanks shall be equipped with dry breaks with any liquid spillage upon the line disconnect not exceeding 10 ml.

3.8 Equipment subject to this section shall be operated and maintained with no defects and:

3.8.1 All fill tubes are equipped with vapor-tight covers including gaskets;

3.8.2 All dry breaks have vapor-tight seals and are equipped with vapor-tight covers or dust covers;

3.8.3 All vapor return passages are operated so there is no obstruction of vapor passage from the storage tank back to the delivery vehicle;

3.8.4 All storage tank vapor return pipes and fill pipes without dry breaks are equipped with vapor-tight covers, including gaskets; and

3.8.5 All hoses, fittings, and couplings are in a vapor-tight condition.

SECTION 4 Service Station Tank Construction Permitting

When the owner or operator of an existing service station causes or allows excavation to begin at a service station for the purpose of adding or replacing an underground gasoline storage tank or tanks, this event will constitute the commencement of reconstruction of the affected facility. When an owner or operator of an existing service station causes or allows a foundation to be built for the purpose of adding or replacing an above ground fixed gasoline storage tank or causes or allows a non-fixed gasoline storage tank to be brought to a service station for the purpose of transferring gasoline into vehicle fuel tanks, this event will constitute the commencement of reconstruction of the affected facility. The owner or operator of the affected facility must submit a permit application and obtain a construction permit before commencing the reconstruction project. The service station thereafter will be considered a new affected facility subject to Regulation 7.

SECTION 5 Equipment Changes

When the owner or operator of a service station chooses to replace, add, or change any of the required equipment including, but not limited to, vent line restrictions, drop tubes and submerged fill tubes, the owner or operator must notify the District in writing prior to installation. This will not constitute a construction or reconstruction.

SECTION 6 Compliance Timetable

All service stations that have had an annual gasoline throughput of 100,000 gallons per year or more for any year since 1978 should already be equipped to comply and all controls should be operational and should be utilized. All service stations that have annual gasoline throughput for any year since 1978, as listed below, shall be equipped according to the requirements of this regulation. This equipment shall be maintained in good operating order and utilized at all times after the dates listed below:

Gallons Throughput per year	**Compliance required on and after**
80,000	May 15, l988
50,000	May 15, l989
20,000	May 15, 1990
10,000	May 15, 1991

Adopted v1/6-13-79; effective 6-13-79; amended v2/11-16-83, v3/1-20-88, v4/8-17-88.